

Monitor and Assess Short-term Reliability – Operate Within Transmission System Limits

January 7-8, 2003 SDT Meeting in New Orleans

Parking Lot Issues

The “Monitor and Assess Short-term Reliability – Operate Within Transmission System Limits” Standard Drafting Team (OWL Standard DT) identified a number of issues and concerns, relative to the standard, that could not be answered by the team. The “Parking Lot Issues” will be forwarded to the NERC, Director – Standards for evaluation and disposition. The list can possibly be given to a subcommittee, group, task force or individual to address. The OWL Standard DT will address or collaborate with others to address concerns (e.g. standard definitions) if requested by the NERC Director – Standards.

The following issues are perceived to go beyond the scope of the OWL Standard DT.

Parking Lot Issues

1. “Transmission Operator” vs. “Transmission Owner” Functional Language

The Functional Model (previously identified as the Reliability Model) definitions and responsibilities of “Transmission Operator” and “Transmission Owner” conflict with actual functional operations. As a specific example PJM was identified as a “transmission operator” but does not perform Reliability Model defined responsibilities. PJM, as the “Transmission Operator,” does not perform switching, maintenance, etc. The respective “Transmission Owners” performs these tasks.

2. “Standing Committee” vs. “Appropriate Body” language

The NERC Reliability Standards Process Manual identifies most Supporting Reference Documents as being approved and authorized by “Standing Committees.” With the future of the NERC Standing Committees in question, the language does not appear to be correct to the OWL Standard DT. A possible solution is to remove the language referring to who develops the associated reference documentation from “Standing Committees” and replace with “Appropriate Entity”

3. Proposed “Operate Within Limits” Standard Definitions

The OWL Standard DT identified the following terms that will be used in the standard. However, most are generic industry terms that may be addressed and defined by other entities such as other SAR/Standard Drafting Teams, Functional Model Review Task Group, Data Exchange Working Group, Operating Reliability Subcommittee, Operating Committee, Planning Committee, Market Interface Committee, the Standard Process Manager, Operating Limits Definition Task Force, etc.

Definitions to support the “Operate Within Limits” Standard that are needed:

Bulk Transmission

Instability

Uncontrolled Separation

Cascading Outages

Reliability

Bulk Transmission System

Short-term Monitoring

“Operate Within Limits” Standard DT

Short-term Reliability Analysis

Real-Time Monitoring

Real-Time Reliability Analysis

Operating Limits – In the West the “Operating Limits” are constantly changing. Define “Operating Limits” for the entire industry.

Critical Facility

Critical Facility Limits

Operating Limit Violation

Industry Accepted Format

Data Quality

Operating Limit Mitigation Plan

Other terms may be added as the standard development process progresses

4. NERC Authority Over “Non-Reliability Model” Entities

What authority does NERC have over “Non-Functional Model” entities to supply data to RA or other functions in the Functional Model? Identification of which bulk power system(s) NERC has authority over is necessary.

5. OSL / SOL / ORL Definitions by Various Groups

Many entities are developing and defining Operating Security Limits (OSL) / Security Operating Limits (SOL) / Reliability Operating Limits (ROL) definitions and limits (e.g. Dave Hilt’s Operating Limits Definition Task Force, “Facility’s Rating” SAR, RCWG, FMTG, etc.). A lot of players are contributing their input into defining various “operating limits.” A consensus on the various definitions is necessary.

6. Functional Model Function Equivalent to the Current RRO

How do we designate a supervisory or administrative function equivalent to the current RRO, which is not found in the Functional Model? In WECC individual “operating security limits” will not be reported to NERC since any “OSL” violations fall under the RRO - WECC Reliability Management System contract which has a confidentiality clause. Only a WECC aggregate number will be reported to NERC, is that sufficient? The OWL Standard DT believes a supervisory function such as to “The Entity Responsible for Regional Responsibilities” may be needed.

The NERC Reliability Standards Process Manual identifies “NERC and Regional Reliability Council Members,” “Regional Differences,” “Regional Standards,” “Criteria for Regional Standards and Regional Differences,” and yet the Reliability Model does not identify the Regions, the RROs, or “Entities Responsible for Regional Responsibilities” in the model. At times the Standard Drafting Team identified RROs in developing Standard Requirements, Expected Performance / Outcome and Measures. To address the lack of RRO or equivalent in the Functional Model, “Compliance Monitor” was used.

7. Compliance of Non-Regional Entities

Compliance-wise, what happens to those entities that are not currently part of a region? How are they picked up within the Reliability Model?

8. * Separation of Standard Reliability Elements and Compliance Aspects *****

The OWL Standard DT questions the appropriateness of the Standard DT designating the respective compliance criteria, including levels of non-compliance and sanctions. The Standard

“Operate Within Limits” Standard DT

DT believes a separate compliance group such as the Compliance Subcommittee should do this task. The Standard Drafting Team strongly believes the compliance of the standards including the level of non-compliance and sanctions should be done by an independent entity and not by the body that is writing the standard.

9. Data Quality

The “Operate Within Limits” Standards do not address the “quality” of the data that is being monitored and assessed. The specification of data quality needs to be addressed, local area differences, sign notation, multipliers (format, timeframe, quality). Example: From a Compliance perspective that RAs and BAs may have sign conventions that are opposite and there will be challenges to who is right and who is wrong. Who is king – who determines the quality of the data? Note: In “Operate Within Limits” Draft Standard the following language is used: “Industry accepted format, timeframe, quality” – who defines these criteria?

10. Timelines for Standards Parameters

The timelines for all of the standards requirements, expected performance / outcomes, measures, compliance factors, etc., need to be defined. Factors that play into this issue are data retention requirements, reporting criteria, auditing criteria, etc. – who defines these criteria?

11. Quality of Tool Accuracy

The state estimator or tool used to perform monitoring and analysis in order to meet this standard and future standards needs to have an “accuracy” criteria. This standard does not address this issue. Does it need to be captured somewhere? If so, then where is the “accuracy” criteria captured? – Who defines “consistent” and “accuracy” criteria?

12. Contingency Criteria

When evaluating the need for requirements concerns arose regarding contingency analysis, N-1, levels of non-conformance, etc. – specifically tests of severity for each parameter. This concern was raised from a Compliance point of view. - Who defines these criteria?

13. Compliance Monitor

In cases where a RA (e.g. RTO) has geographical boundaries in more than one RRO, what criteria is used to identify which Compliance Monitor (i.e. regional perspective) the respective RA (e.g. RTO) will comply with. It is not clear if the most restrictive or least restrictive Compliance Monitor (RRO) requirements will be followed. How are RAs in multi-RROs to develop standards that are consistent with each RRO directives?

14. Link to other SAR and SDT efforts.

Several comments made by the OWL Standard DT require further definition and possible modifications to the “Determine Facility Ratings System Operating Limits and Transfer Capability” SAR effort and may require a subset of each group to collaborate via conference call or meeting. There will be future instances where one group’s progress is impacted and inhibited by another SDT. How does the SDT address such instances? What does the Standards Process Manual instruct the SDTs to do? Is a revision needed?